Addressees:

Director, National Photographic Interpretation Center
Director of Foreign Missile and Space Analysis Center
Director of Scientific Intelligence
Director of Computer Services
Director of Communications
Director of Special Projects
Director of ELINT
Chief, Technical Services Division
Training Officer, National Photographic Interpretation Center
Training Officer, Foreign Missile and Space Analysis Center
Training Officer, Office of Scientific Intelligence
Training Officer, Office of Computer Services
Training Officer, Office of Communications
Training Officer, Office of Special Projects
Training Officer, Office of ELINT
Training Officer, Technical Services Division

COURSE CRITIQUE

Please rate 1-10 (poor to excellent respectively) by placing a check on the scale given. Comment below question where indicated. Use back of pages if needed.

FORM — RATING

1. Format of the course was intended to accommodate to a rough 5% time commitment and to provide for a full-day class treatment of a particular topical area. Please rate:

1 day/month	1	6
4 hours/every 2 weeks	1	4

"ONE DAY" TENDS TO BE ONE DAY WHETHER SOMETHING USEFUL IS BEING ACCOMPLISHED OR NOT. 4 HOURS EVERY 2 WEEKS WOULD BE EASIER TO ARRANGE. EVEN 4 HOURS AFTER NORMAL WORKING HOURS WOULD HAVE LESS IMPACT THAN A THE LOSS OF AN ENTIRE WORK DAY.

Other Alternatives:

2. The point of the applications session was to illustrate where current course material was utilized in the real world. Please rate effectiveness:

Material relevance	1	4
Applications speakers	1	4

3. The purpose of the homework was to exercise topical material with about 8 hours of work. Please rate these:

3 one-hour problems	1	
20 ten-minute problems	1	

HOMEWORK IS WASTE OF TIME IN OVERVIEW COURSE SUCHAS THIS.

4. The goal of the intermediate 2-hour session was to give a "keep-alive" exercise in the topical area. Please rate these alternatives for continuity:

Problem-solving session	1	
Second applications session	1	

PROBLEM SOLVING IS OF LITTLE USE IN THIS TYPE OF COURSE. A GOOD SECOND AGENCY-APPLICATION SESSION WOULD BE MUCH MORE USEFUL.

5. The class was intended to be weighted towards a blackboard-pictorial development in order to convey modelling concepts more readily. Please rate:

DOESN'T MATTER WHAT MEDIA IS USED AS LONG AS THE STUDENT CAN SEE & HEAR AND REFER BACK.

Diagrammatic presentation	1	10 10
Mix of vuegraphs & chalkboard	1	10 10

6. The symbology of various systems disciplines is confusing due to the separate source developments. An effort at consistency was made in order to permit cross interpretation within the technical literature. Please rate effectiveness:

Common symbology	1	10 10
Example illustrations	1	10 10

7. The intent of notes and handout material furnished throughout the month was to tie course topics to technical literature. Please rate:

Effectiveness of handout reprints	1 3	10
Effectiveness of specially developed handouts	1 4	10

NO TIME TO REALLY GET INTO HANDOUTS ALTHOUGH THEY WERE GOOD REFERENCES.

8. General impedimenta (WHY SUCH BEAUTIFUL WORDS?) such as same room same day/month, same format, etc., for providing continuity. Please rate:

Room	1	10 10
Day	1	10 10
Daily sequence	1	10 10

9. The course was designed to present a semi-unitary approach to several disciplines: Please rate applicable areas 1-10:

Communications	8	Optics	3	Acoustics	2
Hum. Eng. & Biomed.	0	Seismics	1	Pictorial	0
Computer Technology	0				

SUBSTANCE

RATING

10. The course material was split 50% basic math tools and 50% in commonality subsystems. (Those subsystems which are pervasive in designs across disciplines.) The sequence was that recommended by ASEE for math modelling related to several fields. Please rate:

Balance of material	1	10
Total content	1	10

The sequence is given below for each session. Please give your rating for both material content and for the applications given both formally and in the course of concept development.

11. Session I; Vectorial Representation; matrices, num. analysis, linear systems, sampling, manipulation

Material	1	9	10
Application	1	7	10

12. Session II; Transforms; convolution, Fourier and Laplace transformations, Z transforms, impulse response, numerical analysis.

Material	1	9	10
Application	1	7	10

13. Session III; Probability and Statistics; random var., expectancy, density functions, distributions, confidence limits

Material	1	9	10
Application	1	5	10

14. Session IV; Stochastic Variable; stationarity, ergodicity, moments, correlation, power spectral density, white noise, square law detection.

Material	1	7	10
Application	1	6	10

15. Session V; Signal Detection; value, cost liklihood ratio detection, Bayes Law.

Material	1	5	10
Application	1	3	10

16. Session VI; Detector Subsystems I; receiver operating characteristics, detection situations, S/N ratio, data smoothing and prediction.

Material	1	3	10
Application	1	2	10

17. Session VII; Detector Subsystems II; non-white noise, whitening, matched filtering, threshold, detectability Markov chains.

Material	1		10
Application	1		10

18. Session VIII; Spatial Processing I; space-time relationships, spatial filtering, correlation matrix for signal and noise.

Material	1	4	10
Application	1	4	10

19. Session IX Spatial Processing II; optimum array, shading, optimum filtering, lobe periodicity.

Material	1	4	10
Application	1		10

20. Session X; Servomechanisms and Control; closed loop systems, regulation, feedback, root locus, stability criteria, bang-bang systems.

Material 1 — 10
Application 1 — 10

21. Session XI; Modulation; analog modulation, AM, FM, PM, supressed band modulation, effects of index of modulation noise immunity.

NOT ATTENDED

Material 1 — 10
Application 1 — 10

22. Session XII; Modulation; PPM, PWM, PCM, error correction codes, noise immunity, entropy. (Content Only)

NOT ATTENDED

Material 1 — 10
Application 1 — 10

NOTE: ① SOME TIME AROUND SESSION VIII THE COURSE "PHILOSOPHY" CHANGED FROM FAIRLY WELL PUT TOGETHER LECTURES BY [redacted] TO MORE CLASS PARTICIPATION (i.e. QUESTIONS EXPERIENCES, FEELINGS, ETC.). THIS WAS A MISTAKE SINCE MUCH VALUABLE TIME WAS WASTED ON QUESTIONS ~~ONLY~~ REALLY UNDERSTOOD BY A FEW IN CLASS. TIME SHOULD HAVE BEEN SPENT PRESENTING A CONCISE BODY OF KNOWLEDGE &TECHNIQUES UNDERSTANDABLE (OR AT LEAST LOGICAL) TO MOST OF THE CLASS. THIS WAS DONE QUITE WELL BY [redacted] IN THE EARLIER LECTURES AND I'M SURE HE COULD HAVE CONTINUED TO DO SO.

STAT

STAT

NOTE: ② THE COURSE CONTENT ON PAPER IS SIMILAR TO COURSES AVAILABLE AT UNIVERSITIES (OUT FOR CERTAIN). THEREFORE,

I FEEL [redacted] THAN THAT OF SUCH MATERIAL DUPLICATES (IN MUCH LESS DEPTH) WHAT IS AVAILABLE OUTSIDE THE AGENCY. THEREFORE AN IN-HOUSE COURSE SHOULD BE CONCERNED WITH IN HOUSE PROBLEM AREAS, DEVELOPMENT AREAS, & OPERATIONAL FUNCTIONS. THE GROSS LACK OF COMMUNICATION BETWEEN VARIOUS OFFICES & DIVISIONS. APPEARS (AT LEAST TO SOMEONE AT MY LEVEL) TO BE A MUCH GREATER BARRIER TO EFFICIENT WORK THAN LACK OF CERTAIN TECHNICAL KNOWLEDGE (WHICH CAN BE MORE EASILY CORRECTED BY SELF-STUDY OR OUTSIDE TECH. COURSES).

(3) IN ANY COURSE WHERE CLASSES ARE INFREQUENT AND THE SUBJECT MATTER CHANGES FROM CLASS TO CLASS, IT IS IMPORTANT THAT NOTES BE DISTRIBUTED PRIOR TO A CLASS AND THAT THESE NOTES CLEARLY STATE WHAT, WHY, & HOW, MATERIAL WILL BE COVERED NEXT CLASS. THESE NOTES SHOULD NOT JUST BE "RELATED" TO THE NEXT CLASS BUT SHOULD BE THE LECTURE/OUTLINE THAT WILL BE FOLLOWED WHEN THE STUDENT ARRIVES IN CLASS.

TOO MANY THINGS HAPPEN BETWEEN CLASS MEETINGS AND TIME IS TOO VALUABLE FOR A STUDENT TO HAVE TO WASTE TIME DECIPHERING A SET OF NOTES THEN FIND OUT THAT THE INSTRUCTOR WON'T BE USING THEM ANYWAY.

SENDER WILL CHECK CLASSIFICATION TOP AND BOTTOM

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TO	NAME AND ADDRESS	DATE	INITIALS
1	AND [redacted]	2-4-71	JK
2	Burney		
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6	ORI [redacted]		

	ACTION		DIRECT REPLY		PREPARE REPLY
	APPROVAL		DISPATCH		RECOMMENDATION
	COMMENT		FILE		RETURN
	CONCURRENCE		INFORMATION		SIGNATURE

Remarks:

Please complete the attached questionnaire and return to Training Officer/OEL before COB 30 March 1971.

[redacted]

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FROM: NAME, ADDRESS AND PHONE NO.	DATE
TRG/OEL	3/23/71

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TO	NAME AND ADDRESS	DATE	INITIALS
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	ACTION		DIRECT REPLY		PREPARE REPLY
	APPROVAL		DISPATCH		RECOMMENDATION
	COMMENT		FILE		RETURN
	CONCURRENCE		INFORMATION		SIGNATURE

Remarks:

George! sorry for the delay, I was out most of last week — a memo follows which is more indicative of my thoughts than the ?'aire which I found I could not fill out in detail — since I was not at too many sessions.

[redacted]

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FROM: NAME, ADDRESS AND PHONE NO.	DATE
[redacted] 6B4406 HQ	1/5/71

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